Cassini Saturn Orbit Insertion Timeline - 2004

Colors: yellow = maneuvers; blue = geometry; red = SOI-related; green = data playbacks

18790100 Jun 23 01:23 Put Jun 22 06:23 Put Jun 29 01:24 Put Jun 20 01:21 Jun Jun 20 01:21 Jun	Colors. yellow - maneuvers, blue - geometry, red - Sor-related, green - data playbacks		11 0 - 20					• • • • •				_	
Second control period Social State Recorders (SSRs) set to SO Soci		_											
181710300 Jun 29 2012 Tue Jun 29 01124 PM SOT-0104508 Segmentations to SVI telementy (SSRS) begins, only real-time engineering (SSRS) begins, only real-time engines, the properties, the	quiet period Solid State Recorders (SSRs) set to SOI configuration		SOI-08d	PM	06:23	22	Jun	Tue	01:23	23 (1 2	Jun	175T00:00
182729177 Jul 01 02131 Med Jun 30 05131 PM SOI-0-10163m Transition to Low-Gain Antenna 1 (LGA)	(SSRs) begins; only real-time engineering at 1896 bps		SOI-01d	PM	01:24	29	Jun	Tue	20:24	9 2	n 2	Jun	181T19:00
182702147 Jul 01 01:11 Wed Jun 30 07:11 PM SOF-011-55 Med Jun 30 07:11 PM SOF-011-55 Med Jun 30 07:12 PM SOF-011-55 Med Jun 30 07:15 PM SOF-011-55 Med	Critical commanding for SOI	d05h Be	SOI-01d	PM	02:24	29	Jun	Tue	21:24	9 2	n 2	Jun	181T20:00
183700147 Jul 10 0211 Wed Jun 30 0711 PM S01-00h25m Ascending ring-plane crossing Distance = 188,500 km (98,500 miles); HI		n4.5mi	SOI-01h	PM	05:51	30	Jun	Wed	00:51)1 (L 0	Jul	182T23:27
183702137 Jul 01 02:21 Wed Jun 30 07:31 PM 301-00.05 M 3	to protective attitude for ascending Protects spacecraft from dust encountered in ring plane; blane crossing turn takes 10 min		SOI-01h	PM	06:11	30	Jun	Wed	01:11)1 (L 0	Jul	182T23:47
183701:12 Jul 01 02:25 Wed Jun 30 07:35 PM S01-0000m Open lacht valves Valves opened in preparation for pressure with responding to the properties of the pr	nding ring-plane crossing Distance = 158,500 km (98,500 miles); High-Gain Antenna (HGA) is oriented to dust ram direction	h25m A s	SOI-00h	PM	07:11	30	Jun	Wed	02:11)1 (L 0	Jul	183T00:47
183701:12 Jul 01 02:36 Wed Jun 30 07:36 PM SOI+000000000000000000000000000000000000	Defore burn start												
Saturn Orbit Insertion Durin Staturn Saturn Orbit Insertion Durin Staturn Communication still likely		h01m O	SOI-00h	PM	07:35	30	Jun	Wed	02:35)1 (L 0	Jul	183T01:11
as seen from Earth as 702:107 Jul 01 03:30 6 Wed Jun 30 08:06 PM SOT+001407 183702:13 Jul 01 03:31 Wed Jun 30 08:37 PM SOT+001407 183702:13 Jul 01 03:54 Wed Jun 30 08:54 PM SOT+0140187 183702:39 Jul 01 04:03 Wed Jun 30 09:05 PM SOT+014027 183702:40 Jul 01 04:03 Wed Jun 30 09:05 PM SOT+014027 183702:45 Jul 01 04:05 Wed Jun 30 09:05 PM SOT+014027 183702:51 Jul 01 04:05 Wed Jun 30 09:05 PM SOT+014027 183702:55 Jul 01 04:12 Wed Jun 30 09:12 PM SOT+014037 183702:55 Jul 01 04:15 Wed Jun 30 09:12 PM SOT+014037 183703:00 Jul 01 04:24 Wed Jun 30 09:22 PM SOT+014058 183703:00 Jul 01 04:30 Wed Jun 30 09:24 PM SOT+014058 183703:00 Jul 01 04:30 Wed Jun 30 09:39 PM SOT+014058 183703:30 Jul 01 04:55 Wed Jun 30 09:57 PM SOT+014058 183703:30 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+014058 183703:30 Jul 01 04:58 Wed Jun 30 09:59 PM SOT+014058 183703:30 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:58 Wed Jun 30 09:59 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183703:40 Jul 01 04:57 Wed Jun 30 09:57 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:33 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:33 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jun 30 10:35 PM SOT+024057 183704:40 Jul 01 05:58 Wed Jul	(1400 mpn); 96 minute burn		SOI-00h	PM	07:36	30	Jun	Wed	02:36	1 (L O	Jul	183T01:12
183T02:12 3ul 01 03:31 Med Jun 30 08:31 PM S01+01h01m Sassin passes behind Cassini division as seen from Earth Saturn Spaceraft has slowed enough to be capturing as seen from Earth Saturn orbit achieved Spaceraft has slowed enough to be capturing as seen from Earth Saturn Saturn Saturn Spaceraft has slowed enough to be capturing as seen from Earth Saturn Saturn Spaceraft has slowed enough to be capturing as seen from Earth Saturn Saturn Spaceraft has slowed enough to be capturing as seen from Earth Saturn Saturn Saturn Spaceraft has slowed enough to be capturing as seen from Earth Saturn	en from Earth	as	SOI+00h	PM	07:59	30	Jun	Wed	02:59)1 (L 0	Jul	183T01:35
183T02:13 Jul 01 03:37 Wed Jun 30 08:57 FM Sol+01h01m Saturn Orbit achieved Spacecraft has slowed enough to be capture gravity and is no longer in escaping orbit (7 Staturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth Saturn Orbit Insertion max burn end is assen from Earth	en from Earth Communication unlikely for 25 minutes	as	SOI+00h	PM	08:06	30	Jun	Wed	03:06)1 (L 0	Jul	183T01:42
183T02:30 Jul 01 04:03 Wed Jun 30 09:04 PM SOI+01h2m as seen from Earth Saturn orbit achieved Spacecraft has slowed enough to be capture mission Cassin passes behind Saturn in entire mission Saturn. 19.80 km (12.400 miles) from Saturn. 19.80 km (12.400 miles) from Cassin passes behind Saturn's Cring as seen from Earth Saturn orbit Insertion nominal burn end of Saturn. 19.80 km (12.400 miles) from Saturn. 19.80 km (12.400 miles) from Cassin passes behind Saturn's Cring as seen from Earth Saturn orbit Insertion nominal burn end Cassin passes behind Saturn's Cring as seen from Earth Saturn orbit Insertion nominal burn end Cassin passes behind Saturn's Cring as seen from Earth Saturn Orbit Insertion nominal burn end Cassin passes behind Saturn's Cring as seen from Earth Saturn Orbit Insertion nominal burn end Cassin passes behind Saturn's Dring as seen from Earth Nominal end of critical sequence; main engine cover fully closed. Will shift if burn ends late will s	en from Earth	as	SOI+00h	PM	08:31	30	Jun	Wed	03:31)1 (L 0	Jul	183T02:07
183T02:39 Jul 01 04:03 Wed Jun 30 09:05 PM SOI+01h18m Saturn orbit achieved	en from Earth Communication unlikely for 28 minutes		SOI+01h	PM	08:37	30	Jun	Wed	03:37)1 (L 0	Jul	183T02:13
183T02:54 Jul 01 04:05 Wed Jun 30 09:15 PM SOI+01h36m Saturn Orbit Insertion nominal burn or end of the same of the sa		h18m Sa	SOI+01h	PM	08:54	30	Jun	Wed	03:54)1 (L O	Jul	183T02:30
183T02:48 Jul 01 04:12 Wed Jun 30 09:12 PM SOI+01h36m Saturn Orbit Insertion nominal burn and Reconfigure radio comm, close main engine cover is closed to protect enging during descending ring plane crossing; will ends late may be solid frequencies than A or B ring statum orbit Insertion nominal burn and Main engine cover is closed to protect enging full statum orbit Insertion nominal burn and Saturn Orbit Insertion nominal burn and Saturn Orbit Insertion nominal burn and Saturn Orbit Insertion nominal burn and seven from Earth point space or spa	est approach to Saturn in entire Distance = 80,230 km (49,850 miles) from center of Saturn, 19,980 km (12,400 miles) from cloud tops		SOI+01h	PM	09:03	30	Jun	Wed	04:03)1 (L O	Jul	183T02:39
183T02:51 Jul 01 04:12 Wed Jun 30 09:15 PM SOI+01h39m Reconfigure radio comm, close main engine cover is closed to protect enging during descending ring plane crossing; will end slate Spaceraft on Earth-point Spaceraft on Earth-point Wed Jun 30 09:22 PM SOI+01h45m Soi	ini passes behind Saturn's C ring en from Earth Communication restored until science turns (C ring is less opaque to Cassini radio fregs than A or B ring)	as	SOI+01h	PM	09:05	30	Jun	Wed	04:05)1 (L 0	Jul	183T02:41
183T02:51 Jul 01 04:15 Wed Jun 30 09:15 PM SOI+01h39m Reconsigned cover, begin turn to Earth-point Spaceraft on Earth-point Spacer		n3 om	SOI+01h	PM	09:12	30	Jun	Wed	04:12	1 (L 0	Jul	183T02:48
183T02:57 Jul 01 04:21 Wed Jun 30 09:21 PM SOI+01h45m Max end of critical sequence SoI+01h45m Max end of critical sequence SoI+01h45m SoI+01h45m SoI+01h45m SoI+01h45m SoI+01h45m SoI+01h45m SoI+01h45m SoI+01h45m Max end of critical sequence SoI+01h45m Max end of critical sequence SoI+01h45m SoI+01h45m SoI+01h45m Max end of critical sequence SoI+01h45m Cassini passes behind Saturn's D ring as seen from Earth SoI+01h55m SoI+01h55m SoI+01h55m SoI+01h55m SoI+01h55m SoI+01h55m SoI+01h55m SoI+02h18m	e cover, begin turn to Earth-point during descending ring plane crossing; will shift if burn ends late	er											
183T02:58 Jul 01 04:22 Med Jun 30 09:22 PM SOI+01h46m Saturn Orbit Insertion max burn end	eraft on Earth-point Will shift if burn ends late	h42m S	SOI+01h	PM	09:18	30	Jun	Wed	04:18	1 (L 0	Jul	183T02:54
183T03:00	engine cover fully closed will shift it burn ends late	m											
183T03:06 Jul 01 04:30 Wed Jun 30 09:30 PM SOI+01h54m Max end of critical sequence 183T03:06 Jul 01 04:30 Wed Jun 30 09:30 PM SOI+01h54m Max end of critical sequence 183T03:07 Jul 01 04:31 Wed Jun 30 09:31 PM SOI+01h54m SOI+01h54m Max end of critical sequence 183T03:07 Jul 01 04:31 Wed Jun 30 09:31 PM SOI+01h54m SO			SOI+01h	PM	09:22	30	Jun	Wed	04:22	1 (L 0	Jul	183T02:58
183T03:06 Jul 01 04:30 Wed Jun 30 09:30 PM SOI+01h55m Soith01h55m	en from Earth Cassini radio frequencies than A or B ring)	as											
communication 183T03:07 Jul 01 04:31 Wed Jun 30 09:31 PM SOI+01h55m 183T03:15 Jul 01 04:39 Wed Jun 30 09:39 PM SOI+02h03m 183T03:30 Jul 01 04:54 Wed Jun 30 09:54 PM SOI+02h18m 183T03:33 Jul 01 04:57 Wed Jun 30 09:57 PM SOI+02h56m 183T04:08 Jul 01 05:33 Wed Jun 30 10:32 PM SOI+02h57m 183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m 183T04:20 Jul 01 05:44 Wed Jun 30 10:35 PM SOI+03h08m 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h22m 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI+04h24m SOIHO1h55m Turn off Earth-line for post-burn science and furn observations Jettison INMS cover Cassini passes behind Saturn's C ring as seen from Earth Cassini passes behind Saturn as seen from Earth Cassini emerges from behind Saturn (and is behind A ring) Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Cassini emerges from be			SOI+01h	PM	09:30	30	Jun	Wed	04:30	1 (L 0	Jul	183T03:06
183T03:37 Jul 01 04:31 Wed Jun 30 09:31 PM SOI+01h55m Observations 183T03:30 Jul 01 04:34 Wed Jun 30 09:39 PM SOI+02h18m Cassini passes behind Saturn's C ring as seen from Earth 183T04:08 Jul 01 05:33 Wed Jun 30 10:32 PM SOI+02h57m Cassini passes behind Saturn (and is behind A ring) 183T04:20 Jul 01 05:44 Wed Jun 30 10:58 Wed Jun 30 10:58 PM SOI+03h08m Cassini emerges from behind A ring as seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h22m Descending ring-plane crossing 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI-04h24m Solidate playback begins SOI+04h24m SOI+04h24m SOI+04h24m SOI-04h24m SOI-			SOI+01h	PM	09:30	30	Jun	Wed	04:30	1 (0	Jul	183T03:06
183T03:15 Jul 01 04:39 Wed Jun 30 09:39 PM SOI+02h03m Jettison INMS cover 183T03:30 Jul 01 04:54 Wed Jun 30 09:54 PM SOI+02h18m Cassini passes behind Saturn's C ring as seen from Earth 183T03:33 Jul 01 04:57 Wed Jun 30 09:57 PM SOI+02h21m Cassini passes behind Saturn as seen from Earth 183T04:08 Jul 01 05:32 Wed Jun 30 10:32 PM SOI+02h56m Turn to protective attitude for descending ring-plane crossing 183T04:20 Jul 01 05:44 Wed Jun 30 10:33 PM SOI+02h57m Cassini emerges from behind A ring seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m Seen from Earth 183T04:34 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI data playback benins SOI Holds A puring Soi PM Soi	off Earth-line for post-burn science Background sequence turns spacecraft to view rings and	h 5 5m Ti											
183T03:30 Jul 01 04:54 Wed Jun 30 09:54 PM SOI+02h18m Cassini passes behind Saturn's C ring as seen from Earth 183T03:33 Jul 01 04:57 Wed Jun 30 09:57 PM SOI+02h21m 183T04:08 Jul 01 05:32 Wed Jun 30 10:32 PM SOI+02h56m 183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m 183T04:20 Jul 01 05:44 Wed Jun 30 10:38 PM SOI+02h57m 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m SOI+03h08m Cassini passes behind Saturn as seen from Earth Turn to protective attitude for descending ring-plane crossing Cassini emerges from behind Saturn (and is behind A ring) Cassini emerges from behind A ring as seen from Earth Cassini emerges from behind A ring as seen from Earth Descending ring-plane crossing Cassini should be in science attitudes and vaccommunicating with Earth; otherwise communicating with Earth; otherwise communic	Ion & Neutral Mass Spectrometer (INMS) cover is		SOI+02h	PM	09:39	30	Jun	Wed	04:39)1 (L 0	Jul	183T03:15
183T03:33 Jul 01 04:57 Wed Jun 30 09:57 PM SOI+02h21m Cassini passes behind Saturn as seen from Earth 183T04:08 Jul 01 05:32 Wed Jun 30 10:32 PM SOI+02h56m 183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m Cassini emerges from behind Saturn (and is behind A ring) 183T04:20 Jul 01 05:44 Wed Jun 30 10:44 PM SOI+03h08m Cassini emerges from behind A ring as seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h22m Descending ring-plane crossing 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m Spacecraft returns to Earth-point; Sol data playback begins Sol Hobback Turn to protective attitude for descending ring-plane crossing to communicating with Earth; otherwise communicating with	removed for post-SOI observations Careful be in science attitudes and will not be communication with Earth, otherwise communication	h18m C											
from Earth 183T04:08 Jul 01 05:32 Wed Jun 30 10:32 PM SOI+02h56m 183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m 183T04:20 Jul 01 05:44 Wed Jun 30 10:44 PM SOI+03h08m 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m 183T04:34 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI+04h	possible Cassini should be in science attitudes and will not be	C	SOT+02b	РМ	09.57	30	מנוד	Wed	04.57	11 (. 0	Jul	183703.33
descending ring-plane crossing 183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m Cassini emerges from behind Saturn (and is behind A ring) 183T04:20 Jul 01 05:44 Wed Jun 30 10:44 PM SOI+03h08m Cassini emerges from behind A ring as seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m Descending ring-plane crossing 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m Soli+04h24m Soli+04h	Earth possible	fro											
183T04:09 Jul 01 05:33 Wed Jun 30 10:33 PM SOI+02h57m Cassini emerges from benind Saturn (and is behind A ring) 183T04:20 Jul 01 05:44 Wed Jun 30 10:44 PM SOI+03h08m Seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h08m Soi+03h02m Descending ring-plane crossing 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI+04	ending ring-plane crossing Cassini should be in science attitudes and will not be	de	SOI+02h	PM	10:32	30	Jun	Wed	05:32)1 (L 0	Jul	183T04:08
183T04:20 Jul 01 05:44 Wed Jun 30 10:44 PM SOI+03h08m Cassini emerges from bening A ring as seen from Earth 183T04:34 Jul 01 05:58 Wed Jun 30 10:58 PM SOI+03h22m Descending ring-plane crossing 183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI+04h24m SOI-04h24m SOI-	in emerges from bening Saturn is behind A ring) communicating with Earth; otherwise communication not likely		SOI+02h	PM	10:33	30	Jun	Wed	05:33)1 (L 0	Jul	183T04:09
183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m SOI data playback begins Sol data playback begins Sol data playback begins	from Earth communication gas from Earth; otherwise communication possible		SOI+03h	PM	10:44	30	Jun	Wed	05:44)1 (L 0	Jul	183T04:20
183T05:36 Jul 01 07:00 Thu Jul 01 12:00 AM SOI+04h24m Spacecraft returns to Earth-point; for 19.5 hours; data played back over Ma	to dust fam as directed by background sequence	h22m D	SOI+03h	PM	10:58	30	Jun	Wed	05:58)1 (L O	Jul	183T04:34
Goldstone			SOI+04h	AM	12:00	01	Jul	Thu	07:00)1 (L O	Jul	183T05:36
maneuver	maneuver	h36m O	SOI+04h	AM	12:12	01	Jul	Thu	07:12)1 (L 0	Jul	183T05:48
Switch to reaction wheel control is a	perore SOI; now reaction wheel control is appropriate	h13m Sv	SOI+08h	AM	03:49	01	Jul	Thu	10:49	1 :	L 0	Jul	183T09:25
183T11:15 Jul 01 12:39 Thu Jul 01 05:39 AM SOI+10h03m First SOI images returned Post-SOI images of Saturn and rings are from recorders	SOI images returned Post-SOI images of Saturn and rings are retrieved from recorders	h03m Fi	SOI+10h	AM	05:39	01	Jul	Thu	12:39	1 :	L O	Jul	183T11:15